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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,137	03/17/2004	Donald Allan Sandusky	LP 5355 US	3277
23416	7590	02/09/2005	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			RONESI, VICKEY M	
			ART UNIT	PAPER NUMBER

1714

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,137

Applicant(s)

SANDUSKY ET AL.

Examiner

Vickey Ronesi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11,13-23 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11,13-23 and 25-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The objection over the specification is withdrawn in light of applicant's amendment dated 11/17/2004 (pages 7-17), however, note that a new objection over the specification has been set forth below in paragraph 7 with respect to new matter introduced by the amendment.
2. The objection over claim 32 is maintained since the misspelled "naphthalenic" was not correctly amended. Presently, it incorrectly reads as "napthalenic."
3. All other objections over the claims are withdrawn in light of applicant's amendment dated 11/17/2004 (page 18), however, note that a new rejection under 35 U.S.C. § 112(1) rejection over claims 1, 11, and 25 has been set forth below in paragraph 9 with respect to new matter introduced by the amendment.
4. The 35 U.S.C. § 112(1) rejection over claims 10 and 20 is overcome in light of applicant's amendment dated 11/17/2004 (pages 18-19) by deleting "kaolin clay extender" from the scope of these claims.
5. Applicant's arguments, see amendment dated 11/17/2004 (pages 20-26) with respect to Barbee et al (US 2002/0137834) have been fully considered and are persuasive. The rejection of claims 1-3, 10-13, 23-25, and 32 under 35 U.S.C. § 103(a) over Barbee et al has been withdrawn. However, upon further consideration, new grounds of rejection are set forth below.
6. New references were uncovered during a search update necessitating a new grounds of rejection. Furthermore, upon further consideration additional objections to the specification have been set forth in paragraph 8 below and a new 35 U.S.C. § 112(2) rejection is set forth in paragraph 10 below. For these reasons, *a second non-final action is set forth as follows.*

Specification

7. The amendment filed 11/17/2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: an amount of clay present in the application that is based on weight %.
8. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required. Applicants' specification does not provide support for the presently claimed range of "up to about 50 %" with respect to the amount of clay nor does the specification provide support for an amount of "50 % clay" alone since the term "50 %" is applied to both clay and "other additives." Applicants' specification and examples only disclose and exemplify clay *and other additives* that are used in a combined amount of about 50 % (page 9, line 21; page 12, line 16; page 15, line 3).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The text of those sections of Title 35, U.S. Code not included in this action
can be found in a prior office action.

9. Claims 1, 11, and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

There is no basis in the original application that the amount of clay present in the application is based on weight %.

10. Claims 1, 3-11, 13-23, and 25-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, 11, and 25, there is no basis for the amount of clay, i.e., is it % based on the total composition, on the amount of millable polyurethane alone, or on the amount of rubber alone? Basis for this uncertainty stems from applicants' own disclosure which teaches that about 50% clay is added to the MPU compositions (page 12, line 16), that clay is added to millable polyurethane (page 7, line 27), and that about 50% clay is present in the rubber (page 9, lines 20-21). It is therefore unclear on what the amount of clay is based.

With respect to claims 8, 9, 18, 29, 30, and 31, there is no basis for the amount of millable polyurethane, i.e., is the amount based on the total composition or just on the combined rubber? Basis for this uncertainty stems from applicants' own disclosure which teaches that the amount is based on the amount of combined rubber (page 5, line 11) but also teaches that the additives are

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included in each individual rubber component prior to combining (page 7, line 27; page 9, lines 20-21). It is therefore unclear on what the amount of millable polyurethane is based.

The remaining claims are rejected for being dependent on a rejected claim.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

11. Claims 1, 3, 5, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bradley et al (US 6,203,450).

With respect to claims 1, 5, 8, and 9, the rejection is adequately set forth in paragraph 5 of action mailed 8/11/2004 and is incorporated here by reference. It is noted that clay is optional as suggested by a percent concentration that includes 0 wt %.

With respect to claim 3, given that Bradley et al discloses a composition that that reads on the presently cited claims, is therefore inherent that its composition have the presently claimed oxygen permeability since such a property is evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above, it is clear that Bradley et al anticipates the presently cited claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

12. Claims 1, 3, 5, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradley et al (US 6,203,450) in view of Nesbitt et al (US 5,976,443).

The discussion with respect to Bradley et al in paragraph 11 above is incorporated here by reference.

Bradley et al discloses that the solid core of its golf ball further comprises standard fillers (col. 4, line 26), however, it does not explicitly disclose the use of clay in a particular amount.

Nesbitt et al discloses a golf ball molded core and teaches filler-reinforcement agents such as clay are preferably added in an amount from 10-100 pbw per 100 parts rubber and are used to lower the cost of the ball and to control the weight of the ball (col. 5, lines 25-48).

It is noted that since a property such as oxygen permeability is evidently dependent upon the nature of the composition used, it is the examiner's position that it is intrinsic that the composition taught by Bradley et al in view of Nesbitt et al exhibit the presently claimed oxygen permeability.

Given that Bradley et al is open to the use of standard fillers to its golf ball core and given the teachings regarding typical fillers and preferable amounts such fillers, it would have been obvious to one of ordinary skill in the art to utilize a typical core filler like clay in the golf ball core of Bradley et al and thereby arrive at the presently cited claims.

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13. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bradley et al (US 6,203,450) in view of Nesbitt et al (US 5,976,443) and further in view of Calabria et al (US 2002/0098914 A1).

The discussion with respect to Bradley et al in view of Nesbitt et al in paragraph 12 above is incorporated here by reference.

Bradley et al is silent with respect to the specific components of the millable polyurethane; however, Bradley et al discloses that the polyurethane rubber can be a polyether-based polyurethane rubber (col. 4, lines 11-12).

Calabria et al discloses a urethane-covered three-piece golf ball whose polyurethane cover comprises a polyol component. Calabria et al teaches that polyurethane rubbers made with ether polyols such as polypropylene ether glycol and in particular polytetramethylene ether glycol exhibit good hydrolytic stability (i.e., substantially impervious to the effects of moisture) and good tensile strength (0073, 0074).

Given that Bradley et al is open to a polyurethane comprising a ether polyol component and given that polypropylene ether glycol and polytetramethylene ether glycol provide improved hydrolytic stability and tensile strength in polyurethane rubbers as taught by Calabria et al, it would have been obvious to one of ordinary skill in the art to utilize polypropylene ether glycol or polytetramethylene ether glycol in Bradley et al and thereby at the presently cited claim.

14. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bradley et al (US 6,203,450) in view of Nesbitt et al (US 5,976,443) and further in view of Calabria et al (US 2002/0098914 A1) and the combined teachings of Grossman et al (US 4,599,370) and

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Jablonowski ("Blends of Polyurethane Rubbers with Conventional Rubbers," Rubber Division, American Chemical Society, Paper No. 46, April 13-16, 1999).

The discussion with respect to Bradley et al in view of Nesbitt et al and further in view of Calabria et al in paragraph 13 above is incorporated here by reference.

Bradley et al discloses that the solid core of its golf ball comprises crosslinking agents and initiators, activators, standard fillers, and other ingredients (col. 4, lines 15-27), however, it does not explicitly disclose the combinations of additives as presently claimed.

Grossman et al discloses a rubber composition and teaches that barium sulfate is a typical filler in rubber compositions and that guanidine derivatives, in particular diphenyl guanidine, are typical vulcanization accelerators. Jablonowski discloses a sulfur curable millable polyether urethane blended with a butadiene rubber (page 6) admixed with additives used in a typical sulfur cure system including zinc chloride with MBTS, silicon dioxide curative, and zinc stearate (pages 4 and 9).

Given that Bradley et al is open to the addition of typical additives to its rubber composition, it would have been obvious to one of ordinary skill in the art to add the specific typical rubber additives as taught by Grossman et al and Jablonowski and thereby arrive at the presently cited claim.

15. Claims 1, 3, 5-7, 11, 13, 15-17, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Feeney et al '389 (US 6,232,389) or Feeney et al '632 (US 6,123,632) in view of Schaefer et al (US 5,385,980).

Feeney et al '389 discloses that bladders use to hold air or other gases inside balls are made from natural rubber (i.e., polyisoprene), butyl rubber, and polyurethane (col. 13, lines 21-22).

Feeney et al '632 discloses a game ball and teaches that a bladder is commonly made of a highly durable, stretchable, inflatable material such as butyl rubber or a polyurethane and that any material which possesses properties and performance qualities similar to either rubber may be used as the bladder material (col. 3, lines 28-37). It is the examiner's position that this therefore also reads on blends of polyurethane and butyl rubbers.

Moreover, it is noted that it is also the examiner's position that a composition that is used in a bladder for play balls could obviously be used in other inflatable bladders such as inner tubes and innerliners.

Neither Feeney et al '389 nor Feeney et al '632 further elaborates on the bladder composition in its disclosure and therefore does not disclose the addition of conventional additives such as fillers.

Nevertheless, Schaefer et al discloses a vulcanizite composition that is used in inflatable articles (abstract), teaches that fillers are commonly used in rubber compositions in amounts ranging from 25-100 pbr, and exemplifies a composition comprising 30 pbr of clay (col. 8, lines 35-43; col. 8, line 64).

It is noted that since a property such as oxygen permeability is evidently dependent upon the nature of the composition used, it is the examiner's position that it is intrinsic that the composition taught by Feeney et al '389 or Feeney et al '632 in view of Schaefer et al exhibit the presently claimed oxygen permeability.

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Given that rubber compositions are known to contain fillers such as clay in preferred amounts, it would have been obvious to one of ordinary skill in the art to utilize a known and common rubber additive such as clay in the inflatable rubber article as disclosed by either Feeney et al '389 or Feeney et al '632 and thereby arrive at the presently cited claims.

16. Claim 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Feeney et al '389 (US 6,232,389) or Feeney et al '632 (US 6,123,632) in view of Schaefer et al (US 5,385,980) and further in view of Calabria et al (US 2002/0098914).

The discussion with respect to either Feeney et al '389 or Feeney et al '632 in view of Schaefer et al in paragraph 15 above is incorporated here by reference.

Both Feeney et al '389 and Feeney et al '632 are silent with respect to the specific components of the polyurethane.

Calabria et al discloses a polyurethane composition and teaches that polyurethane rubbers made with ether polyols such as polypropylene ether glycol and in particular polytetramethylene ether glycol exhibit good hydrolytic stability (i.e., substantially impervious to the effects of moisture) and good tensile strength (0073, 0074).

Given that both Feeney et al '389 and Feeney et al '632 are open to a polyurethane, it would have been obvious to one of ordinary skill in the art to use polypropylene ether glycol or polytetramethylene ether glycol to provide improved hydrolytic stability and tensile strength as taught by Calabria et al and thereby arrive at the presently cited claims.

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17. Claims 8, 9, 18, and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over either Feeney et al '389 (US 6,232,389) or Feeney et al '632 (US 6,123,632) in view of Schaefer et al (US 5,385,980) and further in view of Bradley et al (US 6,203,450).

The discussion with respect to either Feeney et al '389 or Feeney et al '632 in view of Schaefer et al in paragraph 15 above is incorporated here by reference.

Neither Feeney et al '389 nor Feeney et al '632 discloses the relative amounts of polyurethane and rubber.

Bradley et al discloses a golf (i.e., play) ball having a core comprising a blend of millable polyurethane and polybutadiene (col. 4, lines 9-14) and teaches that it is essential that such a curable rubber composition has no more than 50 wt % polyurethane present in the total rubber component since the curing properties are adversely affected (col. 6, lines 36-40).

Given that both Feeney et al '389 and Feeney et al '632 are open to a rubber bladder or core made from butyl rubber, polyisoprene, and/or polyurethane and given that no more than 50 wt % of polyurethane should be utilized as taught by Bradley et al, it would have been obvious to one of ordinary skill in the art to utilize less than 50 wt % of polyurethane in the composition either Feeney et al '389 or Feeney et al '632 and thereby arrive at the presently cited claims.

18. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Feeney et al '389 (US 6,232,389) or Feeney et al '632 (US 6,123,632) and Schaefer et al (US 5,385,980) and further in view of Grossman et al (US 4,599,370) and Jablonowski ("Blends of Polyurethane Rubbers with Conventional Rubbers," Rubber Division, American Chemical Society, Paper No. 46, April 13-16, 1999).

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The discussion with respect to either Feeney et al '389 or Feeney et al '632 in view of Schaefer et al in paragraph 15 above is incorporated here by reference.

Neither Feeney et al '389 nor Feeney et al '632 further elaborates in its disclosure on the bladder composition and therefore does not disclose the addition of additives, nonetheless, it does not teach away from using any either and it is the examiner's position that it would have been well within the capabilities of one of ordinary skill in the art to utilize conventional additives in the rubber compositions disclosed by Feeney et al '389 and Feeney et al '632.

Grossman et al discloses a rubber composition and teaches that barium sulfate is a typical filler in rubber compositions and that guanidine derivatives, in particular diphenyl guanidine, are typical vulcanization accelerators. Jablonowski discloses a sulfur curable millable polyether urethane blended with a butadiene rubber (page 6) admixed with additives used in a typical sulfur cure system including zinc chloride with MBTS, silicon dioxide curative, and zinc stearate (pages 4 and 9).

Given that both Feeney et al '389 and Feeney et al '632 are open to the addition of typical additives to their rubber compositions, it would have been obvious to one of ordinary skill in the art to add conventional additives such as those by Grossman et al and Jablonowski and thereby arrive at the presently cited claims.

19. Claims 1, 3, 5-9, 23, and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koros et al (US 5,593,157) in view of Bradley et al (US 6,203,450) and Horiuchi et al (US 4,592,550).

Koros et al discloses a pressurized tennis ball core comprising rubber and clay (col. 2, line 48).

Bradley et al discloses a golf (i.e., play) ball having a core comprising 5-30 wt % millable polyurethane and 70-95 wt % polybutadiene (col. 4, lines 9-14) and teaches that such a composition provides significant reduction in core compression and has improved resilience properties (col. 3, lines 25-29). Bradley et al also teaches that it is essential that no more than 50 wt % polyurethane is present in the total rubber component since the curing properties are adversely affected otherwise (col. 6, lines 36-40). Moreover, given the teachings of Koros et al that a tennis ball core is desirably made from natural rubber or synthetic polyisoprene, one of ordinary skill would also utilize polyisoprene rubber rather than the polybutadiene.

Given that Koros et al is open to the use of any rubber in its core and given the benefit of Bradley et al's rubber core composition as discussed above, it would have been obvious to one of ordinary skill in the art to utilize a composition comprising millable polyurethane and another rubber in the tennis ball core of Koros et al.

Koros et al is also silent with respect to the amount of clay.

Horiuchi et al discloses a tennis ball core and teaches that common fillers include clay (col. 2, line 49) and exemplifies core compositions including 20 pbr clay (col. 3, line 40).

Since Horiuchi et al discloses typical clay filler concentrations in a tennis ball core, it would have been obvious to one of ordinary skill in the art to utilize the presently claimed amount of clay in a tennis ball core.

Although Koros et al does not disclose a core comprising an alloy of millable polyurethane and another rubber, Koros et al discloses that the rubber in the core can be any rubber utilized as a bladder or core in a play ball (col. 2, lines 43-45).

It is noted that since a property such as oxygen permeability is evidently dependent upon the nature of the composition used, it is the examiner's position that it is intrinsic that the composition taught by Koros et al in view of Bradley et al and Horiuchi et al exhibit the presently claimed oxygen permeability.

In light of the above discussion, it would have been obvious to utilize a tennis ball core comprising millable polyurethane and another rubber and clay in a conventional amount which would intrinsically have the presently claimed oxygen permeability given that a material and its properties are inseparable.

20. Claims 4 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koros et al (US 5,593,157) in view of Bradley et al (US 6,203,450) and Horiuchi et al (US 4,592,550) and further in view of Calabria et al (US 2002/0098914 A1).

The discussion with respect to Koros et al in view of Bradley et al and Horiuchi et al in paragraph 19 above is incorporated here by reference.

Bradley et al is silent with respect to the specific components of the millable polyurethane; however, Bradley et al discloses that the polyurethane rubber can be a polyether-based polyurethane rubber (col. 4, lines 11-12).

Calabria et al discloses a urethane-covered three-piece golf ball whose polyurethane cover comprises a polyol component. Calabria et al teaches that polyurethane rubbers made with

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ether polyols such as polypropylene ether glycol and in particular polytetramethylene ether glycol exhibit good hydrolytic stability (i.e., substantially impervious to the effects of moisture) and good tensile strength (0073, 0074).

Given that Bradley et al is open to a polyurethane comprising a ether polyol component and given that polypropylene ether glycol and polytetramethylene ether glycol provide improved hydrolytic stability and tensile strength in polyurethane rubbers as taught by Calabria et al, it would have been obvious to one of ordinary skill in the art to utilize polypropylene ether glycol or polytetramethylene ether glycol in the polyurethane of Bradley et al and thereby at the presently cited claims.

21. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koros et al (US 5,593,157) in view of Bradley et al (US 6,203,450) and Horiuchi et al (US 4,592,550) and further in view of Jablonowski ("Blends of Polyurethane Rubbers with Conventional Rubbers," Rubber Division, American Chemical Society, Paper No. 46, April 13-16, 1999).

The discussion with respect to Koros et al in view of Bradley et al and Horiuchi et al in paragraph 19 above is incorporated here by reference.

Koros et al discloses that its tennis ball core also includes various additives such as those disclosed on col. 2, lines 46-67, however, it does not explicitly disclose each presently claimed additive.

Horiuchi et al also discloses conventional additives involved in the making of a tennis ball such as those exemplified in Table 1 on col. 3.

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Jablonowski discloses a sulfur curable millable polyether urethane blended with a butadiene rubber (page 6) admixed with additives used in a typical sulfur cure system including zinc chloride with MBTS, silicon dioxide curative, and zinc stearate in addition to N330 carbon black, DBEEA, and processing aids and oils.

Given that Koros et al is open to the addition of typical additives to its rubber composition, it would have been obvious to one of ordinary skill in the art to add the typical polyurethane/polybutadiene rubber additives as taught by Jablonowski and the typical tennis ball core additives as taught by Horiuchi et al in Koros et al and thereby arrive at the presently cited claim.

22. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bradley et al (US 6,203,450), as applied to claims 1, 5, 8, and 9 above, in view of Calabria et al (US 2002/0098914 A1).

The rejection is adequately set forth in paragraph 6 of action mailed 8/11/2004 and is incorporated here by reference.

23. Claims 1, 5-7, 11, 15-17, 23, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feeney et al (US 6,232,389) in view of *Hawley's Chemical Dictionary*. The rejection is adequately set forth in paragraph 6 of action mailed 8/11/2004 and is incorporated here by reference.

The rejection is adequately set forth in paragraph 11 of action mailed 8/11/2004 and is incorporated here by reference.

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24. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feeney et al (US 6,232,389) in view of *Hawley's Chemical Dictionary*, as applied to claims 1, 5-7, 11, 15-17, 23, and 27-29 above, and further in view of Koros et al (US 5,593, 157), Grossman et al (US 4,599,370) and Jablonowski ("Blends of Polyurethane Rubbers with Conventional Rubbers," Rubber Division, American Chemical Society, Paper No. 46, April 13-16, 1999).

The rejection is adequately set forth in paragraph 12 of action mailed 8/11/2004 and is incorporated here by reference.

25. Claims 18, 19, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feeney et al (US 6,232,389) in view of *Hawley's Chemical Dictionary*, as applied to claims 1, 5-7, 11, 15-17, 23, and 27-29 above, and further in view of Bradley et al (US 6,203,450).

The rejection is adequately set forth in paragraph 13 of action mailed 8/11/2004 and is incorporated here by reference.

26. Claims 4, 14 and 26 are rejected under 35 U.S.C.(a) as being unpatentable over Feeney et al (US 6,232,389) in view of Bradley et al (US 6,203,450), as applied to claims 1, 5-9, 11, 15-19, 21-23, and 27-31 above, and further in view of Calabria et al (US 2002/0098914).

The rejection is adequately set forth in paragraph 14 of action mailed 8/11/2004 and is incorporated here by reference.

Response to Arguments

27. Applicant's arguments filed September 23, 2004 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that the references Bradley et al and Feeney et al do not teach, suggest or provide any motivation regarding the manufacture of polyurethane and rubber alloys containing clay.

With respect to argument (A), given that clay is characterized by an amount that includes 0 %, clay is optional in the presently claimed composition. Therefore, the rejections over Bradley et al and Feeney et al are not required to include teachings and motivations regarding the addition of clay. Should the applicants wish to treat clay as mandatorily present it is suggested that the concentration ranges be adjusted so that 0 % is not included.

Correspondence

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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